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BEYER WEAVER & THOMAS LLP
P.O. BOX 778
BERKELEY, CA 94704-0778

EXAMINER

PHAM, HUNG Q

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 06/01/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,143

Applicant(s)

CRIM ET AL.

Examiner

HUNG Q PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-15,17-32,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-15, 17-32 and 35-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 04/05/2004 have been fully considered but they are not persuasive. The pending claims are 1, 3-15, 17-32 and 35-36.

(a) As argued by applicant on page 8, line 27- page 9, line 4:

It is earnestly believed that the permission entry 1502 described in Col. 26, line 28-33 of Bapat et al. does not teach defining at least one expression associated with at least one record of said database, wherein the expression is a calculation expression that can be evaluated at least partly based on at least one field of said at least one record. As such, it is respectfully submitted that the Examiner's rejection is improper for at least this reason and it should be withdrawn.

Examiner respectfully traverses because of the following reasons:

The user access rights is defined by the Bapat permissions table as shown below:

1502

Granted Permissions Table for Table 1

User Name	Object Name	Operation Type
user_x	object_xyz	SELECT
user_x	object_qrs	UPDATE
user_y	object_xyz	SELECT
user_y	object_abc	DELETE
user_z	object_def	SELECT
1510 group_a	object_hij	SELECT
group_z	object_kl	SELECT

1

A permission entry 1502 is tuple having three fields, user name, object name, and operation type. The object name, preferably, is the FDN or Full Distinguish Name for a managed object (Col. 26, Lines 28-33). Referring to FIG. 11A as shown below, each row in the database tables includes a field called the Fully Distinguished Name or

FDN of a managed object followed by columns of data. For example, an FDN can look like /systemid="sys1"/owner="accompany"/devicetype="router" (Col. 19, Lines 24-35).

Row			
FDN	Data 1	...	Data N

As seen, each row of the Granted Permissions Table is defined by a meaningful combination of characters or *expression* to specify a record access right for a user, wherein *the expression associated with a record of the database* by the FDN. Each row in the Granted Permissions Table explicitly defines an access right of a user to a record in the database with its Fully Distinguished Name is equal to the specified Fully Distinguished Name in the Granted Permissions Table. For example, based on a row of the Granted Permissions Table, a user_x can delete any record that has Object Name (FDN) = Record (FDN). As seen, each row expression in the Granted Permissions Table is a mathematical process evaluated by the FDN field of the record to determine the access right. In short, the Bapat technique as discussed performed the claimed *defining at least one expression associated with at least one record of said database, wherein said at least one expression is a calculation expression that can be evaluated at least partly based on at least one field of said at least one record.*

(b) As argued by applicant with respect to claim 3 on page 9, lines 5-9:

Furthermore, it is respectfully submitted that the Examiner's rejection is improper and should be withdrawn for an additional reason because the Examiner has also asserted that Col. 16, lines 28-33 of Bapat et al. teaches at least one expression that is a calculation

expression and can be evaluated at least partly based on at least one state variable of said database.

Examiner respectfully traverses because of the following reason:

As defined by applicant in the specification (page 8, lines 12-13), various state variables of the database could be date, time, number of records, etc.

The Bapat reference, taken as a whole, discloses the claimed state variable of the database, at least in view of number of records as the state of a database. As shown in FIG. 11C, a user's view access right could be defined by using FDN:

View_tablename_username	1110
Username	1111
Tablename	1112
Permissions List	1113
where FDN=	1114
FDN1(key to object)	1115
FDN2	1116
...	
FDNz	1117

And a list of FDN could be defined to indicate the number of records (Col. 21, Lines 13-27).

(c) Applicant's arguments on page 9, line 14-page 10, line 9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3-10 and 28-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Bapat et al. [USP 6,236,996 B1].

Regarding to claims 1 and 28, Bapat teaches a method and a computer program for controlling managed objects. As shown in FIG. 14, tables 310 and 320 as in FIG. 11A are stored in a conventional DBMS 280 (Col. 25, lines 49-50). Rows 311, 312, 321, 322 of the tables 310, 320 contain management information for managed objects (Col. 25, lines 60-61). The FDN operates as the primary key to the data stored in the table

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and to determine which managed objects that a particular user is permitted to access or modify (Col. 19, lines 36-40). Access control for a particular user on a particular managed object is defined by a permissions table as shown below (Col. 26, lines 10-12).

Granted Permissions Table for Table 1

1502	User Name	Object Name	Operation Type	1
	user_x	object_xyz	SELECT	
	user_x	object_qrs	UPDATE	
	user_y	object_xyz	SELECT	
	user_y	object_abc	DELETE	
	user_z	object_def	SELECT	
1510	group_a	object_hij	SELECT	
	group_z	object_jkl	SELECT	

A permission entry 1502 is tuple having three fields, user name, object name, and operation type. The object name, preferably, is the FDN or Full Distinguish Name for a managed object (Col. 26, Lines 28-33). Referring to FIG. 11A as shown below, each row in the database tables includes a field called the Fully Distinguished Name or FDN of a managed object followed by columns of data. For example, an FDN can look like /systemid="sys1"/owner="accompany"/devicetype="router" (Col. 19, Lines 24-35).

Row			
FDN	Data 1	...	Data N

As seen, each row of the Granted Permissions Table is defined by a meaningful combination of characters or *expression* to specify a record access right for a user, wherein *the expression associated with a record of the database* by the FDN. Each row in the Granted Permissions Table explicitly defines an access right of a user to a record in

the database with its Fully Distinguished Name is equal to the specified Fully Distinguished Name in the Granted Permissions Table. For example, based on a row of the Granted Permissions Table, a user_x can delete any record that has Object Name (FDN) = Record (FDN). As seen, each row expression in the Granted Permissions Table is a mathematical process evaluated by the FDN field of the record to determine the access right. In short, the Bapat technique as discussed performed the claimed *defining at least one expression associated with at least one record of said database, wherein said at least one expression is a calculation expression that can be evaluated at least partly based on at least one field of said at least one record*. When a user 300 issues an SQL command to access the DBMS 280 (Col. 22, lines 24-26, Col. 25, lines 65-67), Access Control is enforced by *evaluating FDN as at least one expression for said at least one record*, and *allowing access to said one record based on said evaluating of FDN as at least one expression*, and illustrated by Bapat from Col. 27, line 45 to Col. 28, line 26.

Regarding to claim 3, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *at least one expression is a calculation expression that can be evaluated at least partly based on at least one state variable of said database* (FIG 11C, Col. 21, Lines 13-27).

Regarding to claims 4 and 29, Bapat teaches all the claimed subject matters as discussed in claims 1 and 28, Bapat further discloses *at least one expression can be defined based on fields and state variables of said database, and wherein said evaluating*

operates to return only one of two possible values, one of said possible values indicating that access to said at least one record should be granted, and the other one of said possible values indicating that access to said at least one record should be denied (Col. 26, lines 28-33, Col. 27, line 45-Col. 28, line 26).

Regarding to claim 5, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *evaluation is performed only when a request to access said at least one record has been received* (Col. 25, line 65-Col. 26, line 7).

Regarding to claim 6, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *defining of said at least one expression defines access privileges for a user of said database with respect to accessing one or more records of said database* (FIG. 15A and B).

Regarding to claim 7, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *defining of said at least one expression operates to define access privileges for a user of said database with respect to at least one operation that can be performed on one or more records of said database* (FIG. 15A and B).

Regarding to claim 8, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *defining of said expression defines access privileges for at least one user of said database with respect to access to one or more records in said*

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database, and wherein said defining of said expression operates to define access privileges with respect to at least one operation that may be requested to be performed by said at least one user on one or more records of said database (FIG. 15A and B).

Regarding to claim 30, Bapat teaches all the claim subject matters as discussed in claim 28, Bapat further discloses *defining of said expression is made to define access privileges of at least one user of said database with respect to access to one or more records of said database, and wherein said defining of said expression operates to define access privileges with respect to at least one operation that may be requested to be performed by said at least one user on one or more records of said database (FIG. 15A and B).*

Regarding to claims 9 and 31, Bapat teaches all the claimed subject matters as discussed in claims 8 and 28, Bapat further discloses *at least one user is assigned a password that is associated with said expression (FIG. 15A and B).*

Regarding to claims 10 and 32, Bapat teaches all the claimed subject matters as discussed in claims 1 and 28, Bapat further discloses *access to said at least one record can be for browsing, editing, or deleting of said at least one record (FIG. 15A and B).*

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 17-18, 23-26 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1].

Regarding to claim 35, Bapat teaches a computer program for controlling access to managed objects (Col. 32, Lines 41). As shown in FIG. 14 is a database having one or more records stored therein (Col. 25, lines 49-50 and 55-59). As shown in FIG. 4 is a *Graphical User Interface that can facilitate operation on said one or more records stored in said database* (Col. 11, Lines 39-51). Referring back to FIG. 4, tables 310 and 320 as in

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FIG. 11A are stored in a conventional DBMS 280 (Col. 25, lines 49-50). Rows 311, 312, 321, 322 of the tables 310, 320 contain management information for managed objects (Col. 25, lines 60-61). The FDN operates as the primary key to the data stored in the table and to determine which managed objects that a particular user is permitted to access or modify (Col. 19, lines 36-40). Access control for a particular user on a particular managed object is defined by a permissions table as shown below (Col. 26, lines 10-12).

Granted Permissions Table for Table 1

1502	User Name	Object Name	Operation Type	1
	user_x	object_xyz	SELECT	
	user_x	object_qrs	UPDATE	
	user_y	object_xyz	SELECT	
	user_y	object_abc	DELETE	
	user_z	object_def	SELECT	
1510	group_a	object_hij	SELECT	
	group_z	object_jkl	SELECT	

A permission entry 1502 is tuple having three fields, user name, object name, and operation type. The object name, preferably, is the FDN or Full Distinguish Name for a managed object (Col. 26, Lines 28-33). Referring to FIG. 11A as shown below, each row in the database tables includes a field called the Fully Distinguished Name or FDN of a managed object followed by columns of data. For example, an FDN can look like /systemid="sys1"/owner="accompany"/devicetype="router" (Col. 19, Lines 24-35).

Row			
FDN	Data 1	...	Data N

As seen, each row of the Granted Permissions Table is defined by a meaningful combination of characters or *expression* to specify a record access right for a user, wherein *the expression associated with a record of the database* by the FDN. Each row in the Granted Permissions Table explicitly defines an access right of a user to a record in the database with its Fully Distinguished Name is equal to the specified Fully Distinguished Name in the Granted Permissions Table. For example, based on a row of the Granted Permissions Table, a user_x can delete any record that has Object Name (FDN) = Record (FDN). As seen, each row expression in the Granted Permissions Table is a mathematical process evaluated by the FDN field of the record to determine the access right. In short, the Bapat technique as discussed performed the claimed *defining at least one expression associated with at least one record, based on an expression which is defined for said at least one record, wherein said at least one expression is a calculation expression that can be evaluated at least partly based on at least one field of said at least one record, and wherein said expression defining access privilege for said at least one record which is stored or is to be created in said database*. Bapat does not explicitly teach a *Graphical User Interface* is to facilitate the step of defining access control. However, as disclosed by Bapat, the system administrator 302 creates the permissions tables prior to use of the DBMS 280 by end users. The system administrator 302 invokes a call 440 to the *Create_Permissions_Tables* 442 procedure of the DBMS 280 (Col. 26, lines 18-27). As seen, in order to create the permission table by the *Create_Permissions_Tables* procedure, obviously, a *Graphical User Interface* must have to enter the user name, FDN and access control code as discussed above.

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Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include a Graphical User Interface in order to have a friendly system to define access right for a user.

Regarding to claim 36, Bapat teaches all the claim subject matters as discussed in claim 35, Bapat further discloses *database program further operates to evaluate said expression in order to determine whether access to said at least one record should be granted* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 17, Bapat teaches all the claim subject matters as discussed in claim 35, Bapat does not explicitly teach *Graphical User Interface operates to provide the ability for a user of said database to define an expression associated with at least one operation that may be requested to be performed by another user of said database on said one or more records stored in said database*. However, as discussed in claim 35, the system administrator 302 creates the permissions tables prior to use of the DBMS 280 by end users. The system administrator 302 invokes a call 440 to the *Create_Permissions_Tables* 442 procedure of the DBMS 280 (Col. 26, lines 18-27). As seen, in order to create the permission table by the *Create_Permissions_Tables* procedure, obviously, a *Graphical User Interface* must have to enter the user name, FDN and access control code as discussed above. Therefore, it would have been obvious for one of ordinary skill in the art at the time the

invention was made to include a Graphical User Interface in order to have a friendly system to define access right for a user.

Regarding to claim 18, Bapat teaches all the claim subject matters as discussed in claim 35, Bapat does not explicitly discloses *Graphical User Interface operates to provide the ability for a user to define said expression without requiring said user to write a programming script* (Col. 26, lines 18-50). However, as discussed in claim 35, the system administrator 302 creates the permissions tables prior to use of the DBMS 280 by end users. The system administrator 302 invokes a call 440 to the *Create_Permissions_Tables* 442 procedure of the DBMS 280 (Col. 26, lines 18-27). As seen, in order to create the permission table by the *Create_Permissions_Tables* procedure, obviously, no programming script is required for the system administrator. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to not include a programming script in order to have a friendly system to define access right for a user.

Regarding to claim 23, Bapat teaches all the claim subject matters as discussed in claim 35, Bapat further discloses *database program operates to determine whether access to at least one of said one or more records should be granted or denied* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 24, Bapat teaches all the claim subject matters as discussed in claim 23, Bapat further discloses the step of *determining of whether access to said at least one record should be granted or denied is performed by evaluating a calculation expression for said at least one of said one record* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 25, Bapat teaches all the claim subject matters as discussed in claim 24, Bapat further discloses *access to said at least one record is granted only when said determining determines that access should be granted, and wherein access to said at least one record is denied when said determining determines that access should be denied for said record* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 26, Bapat teaches all the claim subject matters as discussed in claim 24, Bapat further discloses *access to said at least one record can be for browsing, editing, or deleting of said record* (FIG. 15A).

6. Claims 11-15 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1] in view of Elmasri et al. [Fundamentals of Database System].

Regarding to claim 11, Bapat teaches a method for controlling managed objects. As shown in FIG. 14, tables 310 and 320 as in FIG. 11A are stored in a conventional DBMS 280 (Col. 25, lines 49-50). Rows 311, 312, 321, 322 of the tables 310, 320

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contain management information for managed objects (Col. 25, lines 60-61). The FDN operates as the primary key to the data stored in the table and to determine which managed objects that a particular user is permitted to access or modify (Col. 19, lines 36-40). Access control for a particular user on a particular managed object is defined by a permissions table as shown below (Col. 26, lines 10-12).

Granted Permissions Table for Table 1

1502	User Name	Object Name	Operation Type	1
	user_x	object_xyz	SELECT	
	user_x	object_qrs	UPDATE	
	user_y	object_xyz	SELECT	
	user_y	object_abc	DELETE	
	user_z	object_def	SELECT	
1510	group_a	object_hij	SELECT	
	group_z	object_jkl	SELECT	

A permission entry 1502 is tuple having three fields, user name, object name, and operation type. The object name, preferably, is the FDN or Full Distinguish Name for a managed object (Col. 26, Lines 28-33). Referring to FIG. 11A as shown below, each row in the database tables includes a field called the Fully Distinguished Name or FDN of a managed object followed by columns of data. For example, an FDN can look like /systemid="sys1"/owner="accompany"/devicetype="router" (Col. 19, Lines 24-35).

Row			
FDN	Data 1	...	Data N

As seen, each row of the Granted Permissions Table is defined by a meaningful combination of characters or *expression* to specify a record access right for a user, wherein *the expression associated with a record of the database* by the FDN. Each row in

the Granted Permissions Table explicitly defines an access right of a user to a record in the database with its Fully Distinguished Name is equal to the specified Fully Distinguished Name in the Granted Permissions Table. For example, based on a row of the Granted Permissions Table, a user_x can delete any record that has Object Name (FDN) = Record (FDN). As seen, each row expression in the Granted Permissions Table is a mathematical process evaluated by the FDN field of the record to determine the access right. In short, the Bapat technique as discussed performed the claimed *defining at least one expression associated with at least one record of said database, wherein said at least one expression is a calculation expression that can be evaluated at least partly based on at least one field of said at least one record in said database, and wherein said calculation expression defines access privileges of said one or more users with respect to at least one operation that may be requested to be performed by said one or more users on one or more records of said database.* When a user 300 issues an SQL command to access the DBMS 280 (Col. 22, lines 24-26, Col. 25, lines 65-67) for the status of all routers in the network or for information about a specified list of managed objects (Col. 28, lines 27-30) as *receiving a request to perform said at least one operation on one or more records of said database, said request being identified as a request made by said one or more users associated with* user name. Access Control is enforced by *evaluating* user name, object name and operation type as *said calculation expression when said request has been received; said evaluation returning only one of two possible values, one of said possible values indicating that said at least one operation should be granted and another one of said possible values indicating that said at least one operation should be denied; granting said at least one*

operation to be performed when said evaluation returns one said possible value to indicate that said at least one operation should be granted; and denying said at least one operation to be performed when said evaluation returns one said another possible value to indicate that said at least one operation should be denied (Col. 27, line 45-Col. 28, line 26). Elmasri teaches a method of protecting access to a database system by *identifying a password that is associated with one or more users of said database* (Elmasri, page 718). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bapat method by using a password to identify a user a taught by Elmasri in order to have a more secure database system.

Regarding to claim 12, Bapat and Elmasri teaches all the claimed subject matters as discussed in claim 11, Bapat further discloses *at least one operation can be a browse, an edit, or a delete operation* (FIG. 15A and B).

Regarding to claim 13, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 11, Bapat further discloses *calculation expression is not explicitly defined for said at least one operation but said calculation expression is one that has been defined for another operation which has been considered as a related operation to said at least one operation* (FIG. 15A).

Regarding to claim 14, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 11, Bapat further discloses *calculation expression can be evaluated*

at least partly based on a value of at least one field of said at least one record, and wherein said calculation expression can be evaluated at least partly based on at least one state variable of said database (Col. 26, lines 28-33).

Regarding to claim 15, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 14, Bapat further discloses the step of *granting temporary or limited access to said at least one record to allow said evaluating of said calculation expression* (FIG. 15A).

Regarding to claim 19, Bapat teaches all the claim subject matters as discussed in claim 16, Bapat fails to teach *Graphical User Interface provides a window that allows a user to interact with said Graphical User Interface to identify a password for which access privileges may be defined or re-defined*. Elmasri teaches a method of protecting access to a database system by identifying a password that is associated with one or more users of said database (Elmasri, page 718). In the teaching of creating the permission table (Col. 26, lines 16-50), a Graphical User Interface provides a window is implied. In FIG. 15A, a user name is identified by system administrator and the user access right is mapped to the table by *Create_Permissions_Tables* procedure. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bapat method by using a Graphical User Interface to identify a password instead of user name in order to define access privilege for a user.

Regarding to claim 20, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 19, Bapat does not explicitly discloses *Graphical User Interface further provides a window that allows a user to specify a calculation expression which defines access privileges with respect to at least one operation that may be requested to be performed on said one or more records*. However, as discussed in claim 35, the system administrator 302 creates the permissions tables prior to use of the DBMS 280 by end users. The system administrator 302 invokes a call 440 to the *Create_Permissions_Tables* 442 procedure of the DBMS 280 (Col. 26, lines 18-27). As seen, in order to create the permission table by the *Create_Permissions_Tables* procedure, obviously, a *Graphical User Interface provide a window* must have to enter the user name, FDN and access control code as discussed above. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include a Graphical User Interface in order to have a friendly system to define access right for a user.

Regarding to claim 21, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 20, Bapat further discloses *at least one operation can be a browse, edit, or a delete operation* (FIG. 15A).

Regarding to claim 22, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 20, Bapat further discloses *calculation expression can be evaluated at least partly based on a value in at least one field of said one or more records of said*

database, and wherein said calculation expression can be evaluated at least partly based on at least one state variable of said database (FIG 11C, Col. 21, Lines 13-27).

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1] in view of Gorelik et al. [USP 6,651,067 B1].

Regarding to claim 27, Bapat teaches all the claimed subject matters as discussed in claim 24, but fails to disclose *the database further comprises a cache, and wherein said cache operates to store an evaluated result of at least one calculation expression*. Gorelik teaches a database comprises a cache, and cache operates to store an evaluated result (Gorelik, FIG. 3). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bapat system by including a cache and store the result in cache as taught by Gorelik in order to speed up the retrieval process.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Hung Pham
May 24, 2004


SHAHID ALAM
PRIMARY EXAMINER